Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Psychiatry Research 304 (2021) 114136

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

Impact of the COVID-19 pandemic on acute inpatient psychiatric units in Spain

José Manuel Montes [a,b,c,*], Daniel Hernández-Huerta [a]

[a] Department of Psychiatry, University Hospital Ramón y Cajal, Madrid, Spain
[b] Ramón y Cajal Institute for Healthcare Research (IRYCIS), Madrid Spain
[c] Biomedical Research Networking Centre in Mental Health CIBERSAM, Spain

ARTICLE INFO

Keywords:
Mental disorders
Psychiatry
Hospitalization
Spain

ABSTRACT

Patients with more severe mental health symptoms are treated in acute inpatient psychiatric units (AIPUs), but the functioning of these units throughout Spain has been challenged by the COVID-19 pandemic. We therefore conducted a descriptive, cross-sectional study to assess the situation. An online survey was distributed to all hospitals with AIPUs in Spain and made accessible for 28 days. Two scientific coordinators were appointed to supervise the scientific and methodological aspects of the study. The most relevant findings include reductions in numbers of beds and staff, insufficient material resources, changes in action protocols and in admission processes, and limitations in routine therapies, such as group and occupational therapy, psychotherapy and psychoeducational programmes. The possibility of performing ECT was also seriously curtailed. This is the first study to evaluate the impact of the first wave of the COVID-19 pandemic on AIPUs. These data may help improve the quality of care of patients with mental illness in the future.

1. Introduction

The COVID-19 outbreak caused by the SARS-CoV-2 virus reached pandemic status in March 2020. The pandemic has impacted negatively on existing health resources as a whole, and mental health services have been no exception (Arango, 2020). In fact, mental health, aggravated by increased risk factors and social isolation, is being particularly affected by the pandemic and an increase in demand for mental health services is expected (Emanuel et al., 2020; Galea et al., 2020; Pfefferbaum and North, 2020).

According to a survey by the World Health Organization (WHO), the pandemic has disrupted or delayed mental health services worldwide (WHO, 2020a). Sixty percent of the 130 countries surveyed had to suspend psychotherapy services, and around one third reported barriers to accessing psychiatric treatments and emergency interventions (The Lancet Infectious Diseases, 2020). The WHO has alerted stakeholders to this situation and warns of the need to balance care between COVID-19 patients and those requiring essential services (WHO, 2020b).

Acute inpatient psychiatric units (AIPUs) have characteristics that further complicate the situation: patients often have little insight into either their own disease or the risk of infection, and episodes of psychomotor agitation may foster transmission. Moreover, many AIPUs lack isolation rooms, have a closed structure that prevents adequate ventilation, and are completely unprepared to treat patients with respiratory failure. As such, AIPUs have had to combine the usual provision of treatment for mental health conditions with measures to prevent infectious transmission. As the work carried out in AIPUs underpins subsequent continuity of care, it is imperative that the potential impact of the pandemic on the activity of these units be minimized (Hernández-Huerta et al., 2020).

This study surveyed the impact of the COVID-19 pandemic on AIPUs in Spain during the so-called first wave. Deeper insight into the situation will allow us to optimize measures to prevent the spread of the infection and organize resources, and to offer safer and better quality of care during this pandemic, and in other possible situations in the future.

2. Methods

2.1. Respondents and procedures

This was a descriptive cross-sectional study based on a questionnaire comprising 42 questions designed to explore the opinion of professionals and the situation generated by COVID-19 in AIPUs. The questions were grouped under the following categories: organization of the AIPU,

* Corresponding author: Department of Psychiatry, University Hospital Ramón y Cajal, Ctra. Colmenar Viejo km 9.100, CP 28034, Madrid, Spain.
E-mail address: jmanuel.montes@salud.madrid.org (J.M. Montes).

https://doi.org/10.1016/j.psychres.2021.114136
Received 15 March 2021; Received in revised form 19 July 2021; Accepted 22 July 2021
Available online 24 July 2021

admission process, hospitalization, prescriptions, and respondents' opinion on the impact of the pandemic. Respondents were also asked to record their professional category and the characteristics of the hospital where they worked.

Two scientific coordinators (JMM and DHH) with clinical and management experience in AIPUs were appointed to supervise the scientific and methodological aspects of the study. The coordinators participated in all study phases, from design of the data collection survey to review of the documentation generated, ensuring the quality of the data and the validity of the conclusions of the analysis. After review and validation by the coordinators, the survey was uploaded to the Eval and Go online survey platform (https://www.evalandgo.com/es//).

The questionnaire could be accessed for completion over a 28 day-period, and data were collected between 21 May and 18 June 2020. Information about the project and access to the online survey were sent by email to all public and private hospitals with AIPUs in Spain (195 centres). The number of respondents per centre was not limited, and the survey was open to all healthcare professionals who worked in an AIPU. In order to achieve maximum participation and geographical representation, at least one weekly reminder was sent to the centres that had not answered during the period in which the survey remained open.

2.2. Data analysis

A database was generated to store the information collected for subsequent analysis of the responses. In the case of questions related to objective facts, responses were analysed at centre level, with results being shown as a percentage of the total number of participating centres. In the case of centres where several professionals participated, the majority response was taken as the centre's response. In the event of discrepancies, the centre's managers were consulted to determine the causes, and their response was incorporated. In questions relating to individual opinions or experiences, the analysis was carried out on a per-respondent basis, with the results expressed as a percentage of the total survey respondents. In all cases, the results are given in absolute numbers (number of centres or respondents who selected each response) and percentages (percentage of the total respondents for each option). The pooled results and conclusions were validated by the coordinators in an online meeting.

3. Results

A total of 270 psychiatrists from AIPUs located in 132 hospitals completed the survey. One quarter were heads of department, section heads or AIPU coordinators, while 75.1% were physicians who practised in the AIPU. All of Spain was represented geographically. The vast majority of the AIPUs were located in general hospitals (91.7%).

3.1. Impact on AIPU organization

During the first wave of the COVID-19 pandemic, 79.5% (n=105) of hospitals did not change the location of the AIPU, while 20.5% (n=27) either transferred it to a specialized psychiatric hospital (n=18), changed it to a new location within the same hospital (n=5), or moved it to another general hospital (n=4).

The impact on other variables related to AIPU organization, expressed per total number of hospitals, can be seen in Table 1.

Table 1
Impact of COVID-19 on AIPUs organization.

	N = 132
Reduction of beds in AIPU	43 (32.6%)
Reduction of staff in AIPU	45 (34.0%)
Insufficient material resources in AIPU	62 (47.0%)
Lack of specific COVID-19 training for medical staff	35 (26.5%)
Lack of specific COVID-19 training for other staff	35 (26.5%)

3.2. Impact on the admission process in AIPUs

In total, 74.0% (n=200) of the respondents considered that the demand for psychiatric care in the emergency department had decreased.

The precipitating factors leading to new admissions during the first wave of the COVID-19 pandemic can be seen in Fig. 1. Four-fifths of the hospitals (82.6%; n=109) were systematically screening for COVID-19 in the emergency department prior to admission to the AIPU. Of these, 78.9% (n=86) reported that this screening consisted of a physical examination, blood tests, chest X-ray and SARS-CoV-2 PCR test. The remaining 21.1% (n=23) did not carry out all of these additional tests.

In 17.4% (n=23) of hospitals, patients with a positive SARS-CoV-2 PCR test were admitted to the AIPU; 64.4% (n=85) of the hospitals admitted these patients to isolation beds located in the general hospital; and in 18.2% (n=24), they were admitted to units specifically designed for patients with a mental disorder and COVID-19 infection.

With regard to prevention measures for patients hospitalized in AIPUs, 80.3% (n=106) of hospitals reported that these measures were applied systematically in all admissions, while 18.2% (n=24) only applied prevention measures in patients with suspected or confirmed infection, and 1.5% (n=2) took no action. The prevention measures applied were isolation of the patient in their room for $\leq$5 days (45.3%), isolation in their room for >5 days (17.9%), isolation until the patient had a negative SARS-CoV-2 PCR result (12.3%), and other measures (24.5%).

3.3. Impact on hospitalization variables

Due to public health prevention measures, 25.2% (n=68) of respondents reported that the use of coercive measures, such as therapeutic restraints or involuntary admissions, had increased to ensure compliance during hospitalization. Three quarters (75%, n=99) of hospitals lacked a specific intervention protocol for patients admitted with active COVID-19 infection presenting agitation.

3.4. Impact on prescription of psychotropic drugs and other therapies

Almost three quarters of the respondents (70.4%; n=190) reported that the prescription of psychotropic drugs in the AIPU had not been affected. In contrast, 29.6% (n=80) reported that the situation had influenced prescriptions, mainly because of the possibility of interactions with drugs used to treat SARS-CoV-2 infection (n=72), and other varied reasons (n=8).

Just over half (54.4%, n=147) of respondents reported that the most frequent route of administration for antipsychotics prescribed at discharge was oral, while 43.4% (n=117) of centres prescribed a monthly long-acting injectable (LAI).

Adjuvant therapies in the AIPU were also affected during the pandemic, according to 65.2% (n=86) of hospitals. The therapies impacted were group therapy (65.1%, n=83), occupational therapy (29.5%, n=39), psychoeducational programmes (19.5%, n=26), psychotherapy (47.7%, n= 63), individual therapy (22.7%, n= 30), and other (22.7%, n=30).

Furthermore, 63.0% (n=83) of hospitals reported that ECT had been discontinued. The main reasons cited were lack of availability of an anaesthetist (43.4%, n=36), lack of material resources (14.4%, n=12), reorganization of the hospital to care for patients infected with COVID-19 (14.5%, n=12), or discontinuation of ECT by protocol (8.4%, n=7), among a range of other reasons (19.3%, n=16).

3.5. Feedback from respondents

For future epidemics, 93.3% (n=252) of respondents agreed or strongly agreed that it would be necessary to prioritize the establishment of appropriate areas for patients who may present psychiatric decompensation and active infection (Fig. 2). Furthermore, 77.0% (n=208) of

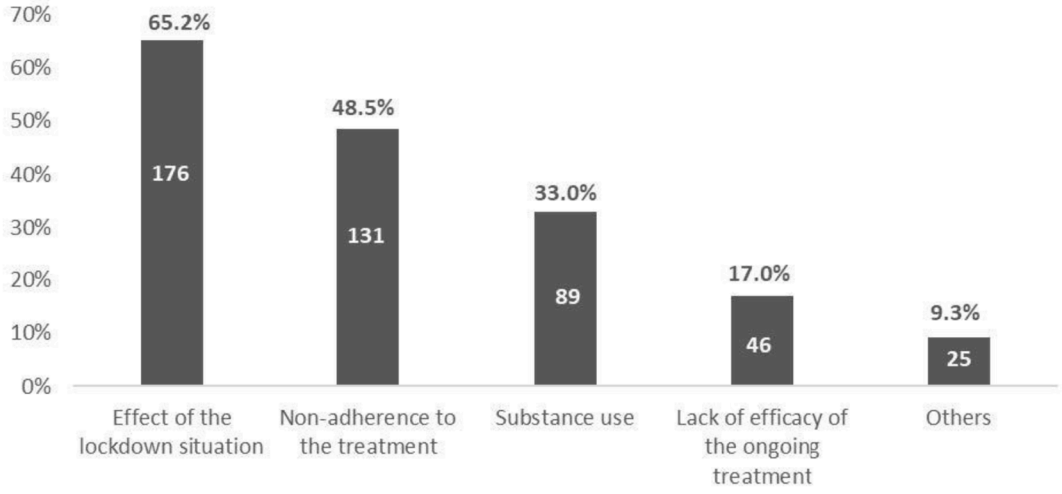

Fig. 1. Precipitating factors leading to clinical decompensation that forced hospitalization in psychiatric AIPUs during the first wave of COVID-19 (N=270).

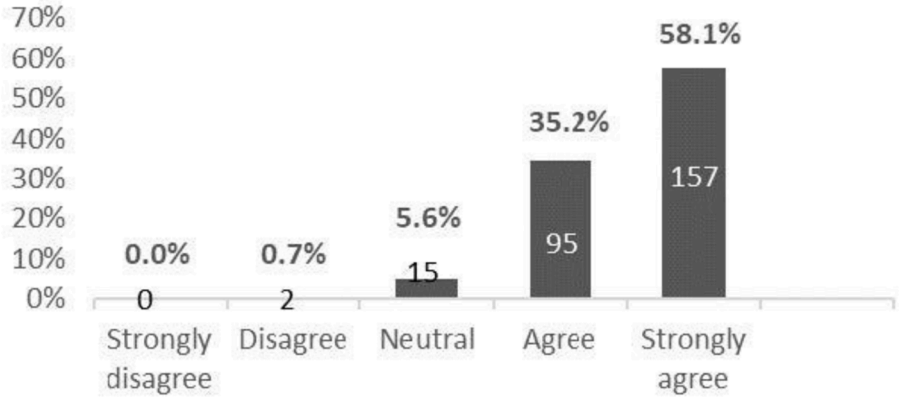

Fig. 2. Should areas be prioritized in the same hospital for patients with psychiatric decompensation and active COVID-19 infection? (N=270).

respondents believed that changes in the AIPUs were needed to deal with future epidemics/pandemics. These changes included respiratory isolation rooms (70.2%), changes in infrastructure design (58.7%), and switching multi-occupancy rooms to single-occupancy only (41.8%).

4. Discussion

To our knowledge, this is the first study to evaluate the impact of the first wave of the COVID-19 pandemic on psychiatric AIPUs in Spain. A total of 132 hospitals participated and this participation was representative and proportional.

In 20.5% of the hospitals, the location of the AIPU changed, there were reductions in the number of beds and staff, and material resources were insufficient. These findings reflect the marked difficulties experienced by AIPUs in their attempts to continue to provide quality care to patients with mental disorders. Specific training for staff on the prevention and management of COVID-19 infection was similar to other studies (Shi et al., 2020).

The literature has suggested that the number of psychiatric emergencies and admissions may have fallen during the first wave of COVID-19 (Capuzzi et al., 2020; Clerici et al., 2020). Our study also supports these findings, as 74.0% of respondents considered that demand had fallen during the observed period. This reduction might not reflect a real decline in the need for admissions but rather difficulty in patient access, and it raises questions regarding the ineffective delivery of essential healthcare due to the pandemic, as predicted by the WHO (WHO, 2020a).

According to 65.2% of respondents, the most important factor precipitating clinical decompensation leading to admission was the lockdown situation, a component that displaced more commonly reported reasons, such as medication non-adherence, substance use, and lack of treatment efficacy (Alvarez-Jimenez et al., 2012).

The outbreak of the pandemic has also brought about a change in the process of admission to psychiatric AIPUs. Screening for SARS-CoV-2 infection has been systematized, as reflected in 82.6% of the hospitals in our study, with the vast majority performing complete screening. Moreover, 80.3% of hospitals implemented prevention measures upon admission, the most widespread being in-room isolation for $\leq$5 days. These screening and prevention interventions are similar to those reported in the literature (Patel et al., 2020; Starace and Ferrara, 2020). It is remarkable that 17.4% of the hospitals admitted patients with a positive SARS-CoV-2 PCR test to the AIPU. Cases of COVID-19 transmission in mental health services occurred at the beginning of the pandemic (Kim and Su, 2020) and for this reason, patients with COVID-19 infection should not be admitted to AIPUs that are inadequately equipped to isolate and treat infectious disease.

A quarter of respondents (25.2%) reported an increase in coercive measures, such as physical restraints or involuntary admission, to ensure compliance with prevention measures. These measures may worsen respiratory failure or the prothrombotic state described in patients with COVID-19 infection. Moreover, the management of agitation usually involves close contact with the patient, with the consequent risk of possible viral transmission (Gómez-Arnau and Hernández-Huerta, 2020; Wong et al., 2020). Nevertheless, 75.0% of hospitals had not designed a

specific action protocol. It would be advisable to develop protocolized interventions to minimize the risk of infection and improve the safety of patients and staff.

It is interesting to note that 70.4% of respondents considered that the pandemic had not impacted drug prescriptions in AIPUs nor had it significantly altered the choice of treatment on discharge. However, reports in the literature of interactions between psychotropic drugs and treatments initially given to treat COVID-19 infection are noteworthy (Bilbul et al., 2020; Carrajo-García et al., 2020; Chatterjee et al., 2020; Yahya et al., 2020). We should therefore take into account the risk of interaction when prescribing psychotropic drugs in similar situations in the future.

The most common route of administration of antipsychotics on discharge was oral (54.3%), but this was closely followed by monthly treatment with LAI antipsychotics (43.4% of respondents). This finding is important since it appears to imply little difference between the use of oral and LAI antipsychotics (Arango et al., 2019). However, difficulties were reported with the use of LAI antipsychotics during the first wave, due to restricted accessibility to healthcare resources or reduced drug stocks in pharmacies (Ifteni et al., 2020). Strategies, including a switch to long-acting formulations, have been recommended to reduce the number of visits to health centres while promoting continuity of care in patients with serious mental illness (Gannon et al., 2020; Kopelovich et al., 2020).

Adjuvant therapies in AIPUs were severely compromised and up to 65.6% of respondents reported that these strategies had been limited by the pandemic. Since telepsychiatry has yielded a high level of satisfaction among patients, with similar quality to face-to-face visits (Salmoiraghi and Hussain, 2015), it should be considered for ongoing care.

The performance of ECT has been limited or even completely suspended in AIPUs (Hernández-Huerta and Alonso-Sánchez, 2020). In our study, 64.1% of respondents confirmed that ECT had been discontinued. According to the literature, the use of ECT during this period has been limited by the fact that it is an aerosol-generating procedure and hospital resources have been redirected towards the care of COVID-19 patients (Purushothaman et al., 2020; Warren et al., 2020). Our results corroborate these observations, identifying the lack of anaesthetists, hospital care reorganization, lack of material resources, or suspension of ECT due to the COVID-19 protocol, as the common factors. This situation underlines the need to implement alternative strategies and intervention protocols that would allow ECT to continue under safe conditions (Bryson and Aloysi, 2020; Gil-Badenes et al., 2020).

Overall, 93.3% of respondents agreed or strongly agreed that adequate space was needed in the same hospital for patients who might present with a concomitant mental disorder and active infection, and 77.0% of respondents believed that changes were needed in AIPUs in order to be able to better cope with future epidemics/pandemics. It is therefore essential that conditions in AIPUs improve if they are to adapt to possible future pandemics. Some of these changes would include the creation of specific protocols for the prevention of transmission, specific areas for combined medical and psychiatric treatment, follow-up of adjuvant therapies using remote techniques, and the implementation of specific guidelines for performing ECT.

One of the limitations of our study is that it is based on feedback from respondents, and not on official hospital data, so the responses may differ slightly from the real situation. Nevertheless, the fact that the survey was answered exclusively by AIPU psychiatrists confers a greater degree of plausibility to the data. It should also be noted that this study presents data from all over Spain. Although Spain was one of the countries with the highest incidence of COVID-19 infection worldwide during the first wave, differences in incidence among the different regions were also considerable, and this may have influenced the results.

In conclusion, our study shows that the pandemic has precipitated changes at different levels in most of Spain's AIPUs. The lack of screening protocols and preventive measures to reduce the risk of infection, along with limited resources, and the suspension of ECT and adjuvant therapies, have negatively impacted the quality of care. These results should be taken into account when implementing modifications in the future to improve the care of patients with mental disorders.

Funding

This project has had the support of an unrestricted grant awarded by the Otsuka-Lundbeck Alliance.

Declaration of Competing Interest

Dr Montes has received grants from and served as consultant, advisor, or CME speaker for Almirall, Angelini, AstraZeneca, Bristol-Myers Squibb, Eli Lilly, Ferrer, GlaxoSmithKline, ISCIII, Janssen-Cilag, Lundbeck, Neuraxpharm, Otsuka, Pfizer, Qualigen, Recordati, SanofiAventis, Servier, and the Spanish Ministry of Science and Innovation (CIBERSAM). Dr Hernández-Huerta has received personal honoraria and non-financial support from Janssen, Casen Recordati, Otsuka, Lundbeck, Ferrer and Angelini.

Acknowledgments

This study has been possible thanks to the invaluable collaboration of the professionals from the 132 AIPUs who participated by contributing data to the comparative analysis of units. We especially want to thank them for their time and dedication to the project.

References

Alvarez-Jimenez, M., Priede, A., Hetrick, S.E., Bendall, S., Killackey, E., Parker, A.G., McGorry, P.D., Gleeson, J.F., 2012. Risk factors for relapse following treatment for first episode psychosis: a systematic review and meta-analysis of longitudinal studies. Schizophr. Res. 139, 116–128. https://doi.org/10.1016/j.schres.2012.05.007.

Arango, C., 2020. Lessons learned from the coronavirus health crisis in Madrid, Spain: how COVID-19 has changed our lives in the last two weeks. Biol. Psychiatry. https://doi.org/10.1016/j.biopsych.2020.04.003.

Arango, C., Baeza, I., Bernardo, M., Cañas, F., de Dios, C., Díaz-Marsá, M., García-Portilla, M.P., Gutiérrez-Rojas, L., Olivares, J.M., Rico-Villademoros, F., Rodríguez-Jiménez, R., Sánchez-Morla, E.M., Segarra, R., Crespo-Facorro, B., 2019. Antipsicóticos inyectables de liberación prolongada para el tratamiento de la esquizofrenia en España. Rev. Psiquiatr. Salud Ment. 12, 92–105. https://doi.org/10.1016/j.rpsm.2018.03.006.

Bilbul, M., Paparone, P., Kim, A.M., Mutalik, S., Ernst, C.L., 2020. Psychopharmacology of COVID-19. Psychosomatics 61, 411–427. https://doi.org/10.1016/j.psym.2020.05.006.

Bryson, E.O., Aloysi, A.S., 2020. A strategy for management of electroconvulsive therapy patients during the COVID-19 pandemic. J. ECT 36, 149–151. https://doi.org/10.1097/YCT.0000000000000702.

Capuzzi, E., Di Brita, C., Caldiroli, A., Colmegna, F., Nava, R., Buoli, M., Clerici, M., 2020. Psychiatric emergency care during Coronavirus 2019 (COVID 19) pandemic lockdown: results from a Department of Mental Health and Addiction of northern Italy. Psychiatry Res. 293, 113463 https://doi.org/10.1016/j.psychres.2020.113463.

Carrajo-García, C.A., Alonso-Sánchez, E.B., Hernández-Huerta, D., Gómez-Arnau, J., 2020. Covid-19 treatment-induced neuropsychiatric adverse effects. Gen. Hosp. Psychiatry. https://doi.org/10.1016/j.genhosppsych.2020.06.001.

Chatterjee, S.S., Malathesh, B.C., Das, S., Singh, O.P., 2020. Interactions of recommended COVID-19 drugs with commonly used psychotropics. Asian J. Psychiatry 52, 102173. https://doi.org/10.1016/j.ajp.2020.102173.

Clerici, M., Durbano, F., Spinogatti, F., Vita, A., de Girolamo, G., Micciolo, R., 2020. Psychiatric hospitalization rates in Italy before and during COVID-19: did they change? An analysis of register data. Ir. J. Psychol. Med. 1–8. https://doi.org/10.1017/ipm.2020.29.

Emanuel, E.J., Persad, G., Upshur, R., Thome, B., Parker, M., Glickman, A., Zhang, C., Boyle, C., Smith, M., Phillips, J.P., 2020. Fair allocation of scarce medical resources in the time of Covid-19. N. Engl. J. Med. https://doi.org/10.1056/NEJMsb2005114.

Galea, S., Merchant, R.M., Lurie, N., 2020. The mental health consequences of COVID-19 and physical distancing: the need for prevention and early intervention. JAMA Intern. Med. 180, 817–818. https://doi.org/10.1001/jamainternmed.2020.1562.

Gannon, J.M., Conlogue, J., Sherwood, R., Nichols, J., Ballough, J.R., Fredrick, N.M., Chengappa, K.N.R., 2020. Long acting injectable antipsychotic medications: Ensuring care continuity during the COVID-19 pandemic restrictions. Schizophr. Res. 222, 532–533. https://doi.org/10.1016/j.schres.2020.05.001.

Gil-Badenes, J., Valero, R., Valentí, M., Macau, E., Bertran, M.J., Claver, G., Bioque, M., Baeza, I., Bastidas Salvadó, A., Lombraña Mencia, M., Pacchiarotti, I., Bernardo, M., Vieta, E., 2020. Electroconvulsive therapy protocol adaptation during the COVID-19

pandemic. J. Affect. Disord. 276, 241–248. https://doi.org/10.1016/j.jad.2020.06.051.
Gómez-Arnau, J., Hernández-Huerta, D., 2020. Agitation management during the COVID-19 pandemic: the time for a noncoercive approach is now. Prim. Care Companion CNS Disord. 22 https://doi.org/10.4088/PCC.20com02734.
Hernández-Huerta, D., Alonso-Sánchez, E.B., 2020. Access barriers to electroconvulsive therapy during COVID-19 pandemic. Psychiatry Res. 289, 113057 https://doi.org/10.1016/j.psychres.2020.113057.
Hernández-Huerta, D., Alonso-Sánchez, E.B., Carrajo-Garcia, C.A., Montes-Rodríguez, J. M., 2020. The impact of COVID-19 on acute psychiatric inpatient unit. Psychiatry Res. 290, 113107 https://doi.org/10.1016/j.psychres.2020.113107.
Ifteni, P., Dima, L., Teodorescu, A., 2020. Long-acting injectable antipsychotics treatment during COVID-19 pandemic - a new challenge. Schizophr. Res. 220, 265–266. https://doi.org/10.1016/j.schres.2020.04.030.
Kim, S.-W., Su, K.-P., 2020. Using psychoneuroimmunity against COVID-19. Brain. Behav. Immun. https://doi.org/10.1016/j.bbi.2020.03.025.
Kopelovich, S.L., Monroe-DeVita, M., Buck, B.E., Brenner, C., Moser, L., Jarskog, L.F., Harker, S., Chwastiak, L.A., 2020. Community mental health care delivery during the COVID-19 pandemic: practical strategies for improving care for people with serious mental illness. Community Ment. Health J. 1–11. https://doi.org/10.1007/s10597-020-00662-z.
Patel, S., Gautam, M., Mahr, G., 2020. COVID-19 and infection control: a perspective from the psychiatric ward. Prim. Care Companion CNS Disord. 22 https://doi.org/10.4088/PCC.20com02650.
Pfefferbaum, B., North, C.S., 2020. Mental Health and the Covid-19 Pandemic. N. Engl. J. Med. 383, 510–512. https://doi.org/10.1056/NEJMp2008017.
Purushothaman, S., Fung, D., Reinders, J., Garrett-Walcott, S., Buda, M., Moudgil, V., Emmerson, B., 2020. Electroconvulsive therapy, personal protective equipment and aerosol generating procedures: a review to guide practice during Coronavirus Disease 2019 (COVID-19) pandemic. Australas. Psychiatry Bull. R. Aust. N. Z. Coll. Psychiatr. 1039856220953699 https://doi.org/10.1177/1039856220953699.
Salmoiraghi, A., Hussain, S., 2015. A systematic review of the use of telepsychiatry in acute settings. J. Psychiatr. Pract. 21, 389–393. https://doi.org/10.1097/PRA.0000000000000103.
Shi, Y., Wang, J., Yang, Y., Wang, Z., Wang, G., Hashimoto, K., Zhang, K., Liu, H., 2020. Knowledge and attitudes of medical staff in Chinese psychiatric hospitals regarding COVID-19. Brain Behav. Immun. - Health 4, 100064. https://doi.org/10.1016/j.bbih.2020.100064.
Starace, F., Ferrara, M., 2020. COVID-19 disease emergency operational instructions for Mental Health Departments issued by the Italian Society of Epidemiological Psychiatry. Epidemiol. Psychiatr. Sci. 29, e116. https://doi.org/10.1017/S2045796020000372.
The Lancet Infectious Diseases, 2020. The intersection of COVID-19 and mental health. Lancet Infect. Dis. 20, 1217. https://doi.org/10.1016/S1473-3099(20)30797-0.
Warren, N., Siskind, D., Lie, D., 2020. Electroconvulsive therapy during severe acute respiratory syndrome coronavirus 2 pandemic. Aust. N. Z. J. Psychiatry 4867420945777. https://doi.org/10.1177/0004867420945777.
WHO, 2020. The impact of COVID-19 on mental, neurological and substance use services: results of a rapid assessment. World Health Organization, Geneva.
WHO, 2020. Maintaining Essential Health Services: Operational Guidance for the COVID-19 Context.
Wong, A.H., Roppolo, L.P., Chang, B.P., Yonkers, K.A., Wilson, M.P., Powsner, S., Rozel, J.S., 2020. Management of agitation during the COVID-19 pandemic. West. J. Emerg. Med. 21, 795–800. https://doi.org/10.5811/westjem.2020.5.47789.
Yahya, A.S., Khawaja, S., Chukwuma, J., 2020. The use of “novel pharmacology” in the treatment of COVID-19 and potential psychiatric risks. Prim. Care Companion CNS Disord. 22 https://doi.org/10.4088/PCC.20com02638.